*****Suspended*****

Trend Study 2-18-96

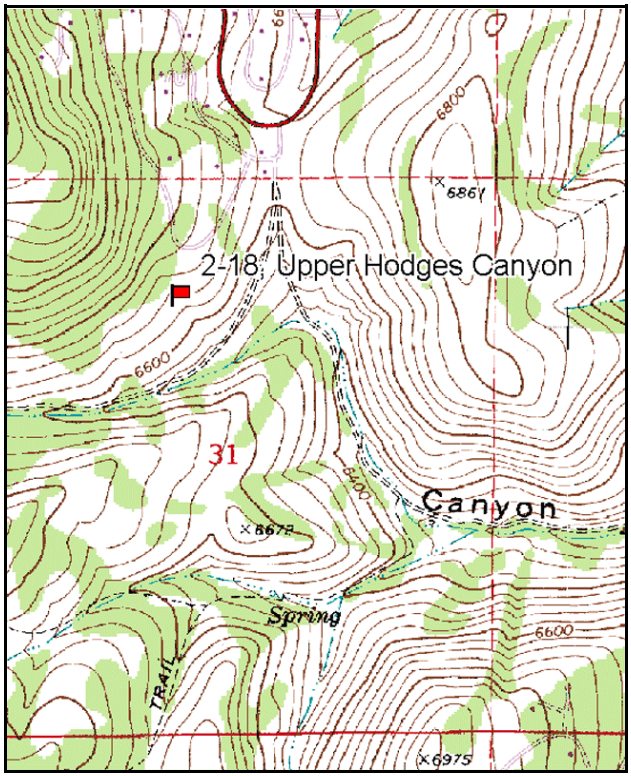
Study site name: Upper Hodges Canyon . Vegetation type: Mountain Brush .

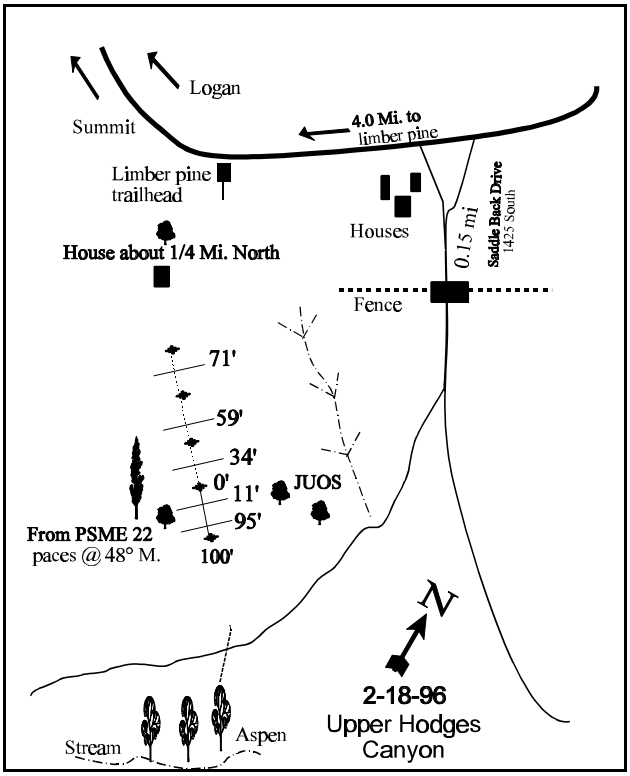
Compass bearing: frequency baseline 161 degrees magnetic.

Frequency belt placement: line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

LOCATION DESCRIPTION

From Bear Lake Summit in Logan Canyon proceed towards Garden City. Begin to note mileage just past the summit at the "Limber Pine" trailhead sign. Proceed 4.0 miles and turn right at the dirt road (Saddle Back Drive, 1435 So.). Proceed 0.15 miles to a gate, go through the gate and take the first road to the right. Travel 0.2 miles to the first aspen tree on the left and stop. Walk at 268 degrees true to a large juniper at the top of the first ridge. Walk west to a Douglas fir. On an azimuth of 48 degrees magnetic from the pine walk 22 paces to the 0-foot stake of the baseline marked by browse tag #7981. Baseline runs at 161 degrees magnetic. The rest of the baseline runs north off the 0-foot baseline at an azimuth of 343 degrees magnetic.





Map Name: Garden City

Diagrammatic Sketch

Township 14N , Range 5E , Section 31

UTM 4640459 N, 464283 E

DISCUSSION

Trend study No. 2-18

*****SUSPENDED** - This site was suspended in 2001 and will be reevaluated in 2006.

The Upper Hodges Canyon trend study is located approximately 1 mile further up Hodges Canyon than Study Number #2-15, a location that probably is above the upper limit of severe deer winter range. The primary big game user would be deer and elk, but pellet groups of either occur infrequently. Cattle use the area in summer. The study site is a mixed mountain brush type on a moderate (20%), southeast-facing slope at 6,640 feet in elevation.

Soil characteristics are identical to those described in the write-up for study 2-15, the Lower Hodges Canyon site. The "Yeates Hollow" soil is very deep, well drained and productive. Soil should not be limiting to plant growth. The erosion hazard is only moderate (Campbell and Lacey 1982). Soil at the site has a loam to a clay loam texture and soil reaction is moderately acidic (pH of 6.0). Organic matter is high at 5.8%. Effective rooting depth (see methods) was estimated at almost 13 inches. The study site has a diverse plant community that provides adequate ground cover to help prevent soil erosion.

The key browse species are mountain big sagebrush and antelope bitterbrush which account for 43% of the browse cover. Mountain big sagebrush density was estimated at 1,799 plants/acre in 1984. The population was moderate to heavily hedged, in good vigor, and had a decadency rate of 44%. No seedlings were encountered and young plants were infrequent. Density increased by 1990 due to an increase in young and mature plants. Utilization was light to moderate and percent decadency declined to 23%. Vigor was reduced in 44% of the decadent sagebrush however. The sagebrush has maintained a fairly stable mature population since 1990. The number of decadent plants has declined from 23% of the population in 1990 to 10% in 1996. However, the number of young have gone down from 15% to 1%. Dead plants, first counted in 1996, indicate that there is one dead plant to every three live plants. This high ratio would support the data which suggest a decline in population density since 1990. Utilization is light to moderate and vigor good on most plants. Recruitment is reduced with only one seedling and one young plant encountered in the density strips.

Bitterbrush has maintained a stable population density since 1984 at around 1,500 plants/acre. Utilization was very heavy in 1984 with 75% of the shrubs displaying heavy use (>60% of twigs browsed). Use was mostly light in 1990, then heavy again in 1996. Vigor continues to be normal and percent decadency low at 10%.

Serviceberry also produces some preferred forage on the site. Population density was estimated at 840 plants/acre in 1996. Mature plants averaged just over 3 feet in height with a crown of nearly 4 feet. Heavy use occurred on 67% of the shrubs in 1984. At the 1990 reading, use was moderate and vigor was good. However, decadency increased from zero to 67%. By 1996, use was again moderate to heavy and vigor reduced due to a rust infestation. Percent decadence declined to 7%. Other shrubs found on the site include mountain snowberry, chokecherry, woods rose, snowbrush ceanothus, and wyeth eriogonum.

The herbaceous understory is diverse and productive with both grasses and forbs making substantial contributions to total forage production. Among grasses, the important species are Kentucky bluegrass, bluebunch wheatgrass, and Sandberg bluegrass. Grasses showed evidence of light use by cattle in 1984, with no apparent preference for any particular species. Utilization by livestock was much heavier in 1990 and 1996 making identification difficult. Unutilized grasses included Kentucky bluegrass and subalpine needlegrass.

Forb composition includes a large number of species, yet only a few are important to monitor. The most abundant forb species are increasers that include mulesears wyethia, western yarrow, pacific aster, and Fremont geranium. Mulesears is the most abundant forb and an increaser with heavy grazing. It accounts for 70% of the forb cover and 33% of the herbaceous cover. This forb is used occasionally by deer and elk but not usually by livestock (Stubbendieck et al. 1986).

1984 APPARENT TREND ASSESSMENT

This site is ecologically stable in almost all respects. The soil surface has an almost complete cover of live vegetation and litter and shows few signs of erosion. In vegetational terms, any potential increase of mulesear wyethia should be closely monitored and checked against any decrease in the key species.

1990 TREND ASSESSMENT

This 6,640 foot elevation site receives year-round use by deer. There is also sign of elk and moose. Cattle were present on this private land when the study was read on July 25, 1990. Perennial grasses had been heavily grazed, making identification difficult. Density and diversity of herbaceous species is high and not significantly changed from 1984. Key browse species, most notably mountain big sagebrush and bitterbrush, show improvements in age class structure, reduced heavy use, and improved decadency rates. Sagebrush canopy cover averages 9%, while bitterbrush cover is 4%. The browse is lightly to moderately hedged.

TREND ASSESSMENT
soil - stable (3)
browse - up (5)
herbaceous understory - slightly improved (4)

1996 TREND ASSESSMENT

Soil trend is slightly up due to a decline in percent bare ground. Vegetation and litter cover are abundant and well dispersed. The browse trend is stable for the key species, mountain big sagebrush and antelope bitterbrush. However, mountain big sagebrush has declined in density since 1990. Sample size was increased in 1996 but the high proportion of dead plants on the site (480 plants/acre) would suggest a decline in sagebrush density has occurred. It should be kept in mind that sagebrush only makes up 20% of the browse cover. Utilization and vigor are similar to that reported in 1990, and percent decadency declined from 23% to 10%. Bitterbrush shows a stable trend with heavier use than was found in 1990. The herbaceous trend is stable for grasses and slightly up for forbs. Sum of nested frequency for perennial grasses remained stable since 1990. However, Kentucky bluegrass and Sandberg bluegrass have increased significantly in sum of nested frequency. Forbs increased in sum of nested frequency with western yarrow and pacific aster increasing significantly. Unfortunately all of these species are considered increasers under heavy livestock grazing. Overall, trend for the herbaceous understory is slightly up.

TREND ASSESSMENT
soil - up slightly (4)
browse - stable for key species (3)
herbaceous understory - up slightly but dominated by mulesears wyethia (4)

HERBACEOUS TRENDS --
Herd unit 02 , Study no: 18

Type	Species	Nested Frequency			Quadrat Frequency			Average Cover %
		'84	'90	'96	'84	'90	'96	'96
G	Agropyron spicatum	126	145	168	52	55	58	4.32
G	Agropyron trachycaulum	$_{b}$72	$_{a}$-	$_{a}$-	32	-	-	-
G	Bromus japonicus (a)	-	-	15	-	-	6	.25
G	Bromus marginatus	28	29	28	14	15	14	.72
G	Bromus tectorum (a)	-	-	128	-	-	40	3.05
G	Carex spp.	$_{a}$-	$_{b}$12	$_{ab}$6	-	5	2	.03
G	Dactylis glomerata	-	-	3	-	-	1	.03
G	Elymus cinereus	3	2	3	1	1	1	.15
G	Koeleria cristata	$_{b}$63	$_{a}$23	$_{a}$19	28	10	11	.33
G	Melica bulbosa	2	3	2	2	2	1	.00
G	Poa fendleriana	$_{a}$-	$_{c}$90	$_{b}$24	-	34	13	.41
G	Poa pratensis	$_{ab}$90	$_{a}$78	$_{b}$129	34	35	45	6.44
G	Poa secunda	$_{a}$-	$_{b}$11	$_{c}$97	-	6	35	4.33
G	Stipa columbiana	$_{a}$19	$_{b}$113	$_{a}$34	13	46	13	.60
G	Stipa lettermani	-	-	4	-	-	2	.01
Total for Annual Grasses		0	0	143	0	0	46	3.30
Total for Perennial Grasses		403	506	517	176	209	196	17.41
Total for Grasses		403	506	660	176	209	242	20.72
F	Achillea millefolium	$_{b}$116	$_{a}$49	$_{b}$105	41	22	40	1.31
F	Agoseris glauca	5	5	-	2	3	-	-
F	Arabis spp.	$_{a}$-	$_{b}$24	$_{a}$-	-	11	-	-
F	Aster chilensis	$_{a}$27	$_{a}$28	$_{b}$91	11	12	33	1.36
F	Balsamorhiza hookeri	3	1	1	1	1	1	.15
F	Camelina microcarpa (a)	-	-	3	-	-	1	.00
F	Calochortus nuttallii	$_{b}$14	$_{a}$6	$_{a}$-	7	2	-	-
F	Cirsium spp.	1	1	-	1	1	-	-
F	Collomia linearis (a)	-	-	10	-	-	4	.02
F	Comandra pallida	21	16	20	9	8	8	.11
F	Collinsia parviflora (a)	-	-	43	-	-	20	.10
F	Crepis acuminata	-	6	5	-	2	2	.03
F	Epilobium brachycarpum (a)	-	-	5	-	-	3	.01
F	Eriogonum umbellatum	-	1	-	-	1	-	-
F	Geranium viscosissimum	24	14	26	13	9	17	1.81
F	Lappula occidentalis (a)	-	-	2	-	-	1	.00

Type	Species	Nested Frequency			Quadrat Frequency			Average Cover %
		'84	'90	'96	'84	'90	'96	'96
F	Lactuca serriola	-	3	3	-	2	1	.00
F	Linum lewisii	3	1	-	1	1	-	.00
F	Lupinus sericeus	$_{b}$20	$_{ab}$9	$_{a}$-	10	4	-	.03
F	Machaeranthera canescens	-	1	-	-	1	-	-
F	Navarretia spp.	-	-	3	-	-	1	.00
F	Penstemon humilis	2	1	-	1	1	-	-
F	Penstemon spp.	-	3	5	-	1	2	.03
F	Phlox longifolia	$_{a}$-	$_{b}$14	$_{b}$22	-	8	10	.15
F	Polygonum douglasii (a)	-	-	18	-	-	7	.03
F	Potentilla gracilis	3	-	-	1	-	-	-
F	Senecio multilobatus	-	5	-	-	3	-	-
F	Solidago missouriensis	$_{a}$-	$_{a}$-	$_{b}$12	-	-	5	.27
F	Taraxacum officinale	-	3	8	-	1	3	.01
F	Tragopogon dubius	14	24	20	7	11	8	.16
F	Unknown forb-perennial	$_{b}$13	$_{a}$3	$_{a}$-	6	1	-	-
F	Veratrum californicum	1	-	-	1	-	-	-
F	Viguiera multiflora	-	2	-	-	1	-	-
F	Wyethia amplexicaulis	105	101	124	53	44	54	12.93
Total for Annual Forbs		0	0	81	0	0	36	0.17
Total for Perennial Forbs		372	321	445	165	151	185	18.40
Total for Forbs		372	321	526	165	151	221	18.58

Values with different subscript letters are significantly different at alpha = 0.10 (annuals excluded)

BROWSE TRENDS --
Herd unit 02 , Study no: 18

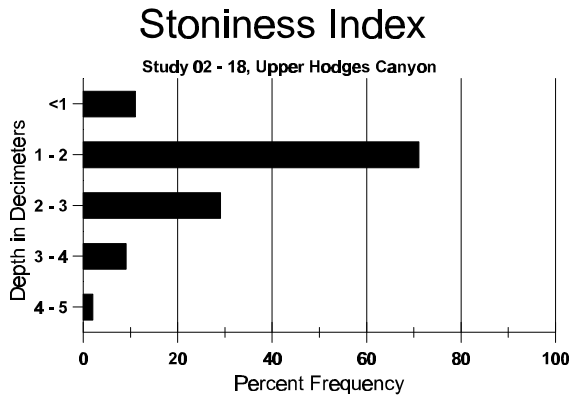
Type	Species	Strip Frequency '96	Average Cover % '96
B	Amelanchier alnifolia	35	4.27
B	Artemisia tridentata vaseyana	46	6.62
B	Ceanothus velutinus	1	.15
B	Chrysothamnus viscidiflorus stenophyllus	2	-
B	Eriogonum heracleoides	17	.81
B	Mahonia repens	2	.04
B	Prunus virginiana	3	.21
B	Purshia tridentata	53	7.83
B	Rosa woodsii	5	.78
B	Symphoricarpos oreophilus	59	11.19
Total for Browse		223	31.92

BASIC COVER --
Herd unit 02 , Study no: 18

Cover Type	Nested Frequency '96	Average Cover % '84	'90	'96
Vegetation	370	1.50	5.75	60.86
Rock	71	.25	1.00	2.48
Pavement	61	.50	.25	.30
Litter	397	89.50	80.75	68.50
Cryptogams	20	0	0	.28
Bare Ground	119	8.25	12.25	3.43

SOIL ANALYSIS DATA --
Herd Unit 02, Study no: 18, Upper Hodges Canyon

Effective rooting depth (in)	Temp °F (depth)	PH	%sand	%silt	%clay	%0M	PPM P	PPM K	dS/m
12.5	53.8 (14.8)	6.0	38.9	34.1	27.0	5.8	45.8	243.2	.5



PELLET GROUP FREQUENCY --
Herd unit 02 , Study no: 18

Type	Quadrat Frequency '96
Elk	1
Deer	8
Cattle	6

BROWSE CHARACTERISTICS --
Herd unit 02 , Study no: 18

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Amelanchier alnifolia																		
S	84	1	-	-	-	-	-	-	-	-	1	-	-	-	66			1
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	1	-	-	1	-	-	-	66			1
	96	1	-	-	-	-	-	-	-	-	-	1	-	-	20			1
M	84	-	1	2	-	-	-	-	-	-	3	-	-	-	200	40	32	3
	90	-	1	-	-	-	-	-	-	-	1	-	-	-	66	23	20	1
	96	-	26	12	-	-	-	-	-	-	3	15	20	-	760	38	46	38
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	1	-	2	1	-	-	-	-	4	-	-	-	266			4
	96	-	1	1	-	1	-	-	-	-	2	-	1	-	60			3
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	40			2

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	33%	67%	00%	+50%
'90	50%	00%	00%	+53%
'96	67%	31%	50%	

Total Plants/Acre (excluding Dead & Seedlings)				
'84	200	Dec:		0%
'90	398			67%
'96	840			7%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Artemisia tridentata vaseyana																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	2	-	-	-	-	-	-	-	-	2	-	-	-	133			2
	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
Y	84	-	1	-	-	-	-	-	-	-	1	-	-	-	66			1
	90	5	-	-	-	-	-	1	-	-	6	-	-	-	400			6
	96	-	1	-	-	-	-	-	-	-	1	-	-	-	20			1
M	84	-	9	5	-	-	-	-	-	-	14	-	-	-	933	26	19	14
	90	16	2	-	6	-	-	-	-	-	23	1	-	-	1600	28	42	24
	96	38	21	1	-	-	-	-	-	-	58	-	2	-	1200	27	36	60
D	84	-	7	5	-	-	-	-	-	-	11	1	-	-	800			12
	90	8	-	1	-	-	-	-	-	-	5	-	1	3	600			9
	96	1	5	1	-	-	-	-	-	-	3	-	-	4	140			7
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	480			24

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	63%	37%	00%	+31%
'90	05%	03%	10%	-48%
'96	40%	03%	09%	

Total Plants/Acre (excluding Dead & Seedlings)				
'84	1799	Dec:		44%
'90	2600			23%
'96	1360			10%

Ceanothus velutinus																		
Y	84	1	-	-	-	-	-	-	-	-	1	-	-	-	66			1
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	1	-	-	-	-	-	-	-	1	-	-	-	20	4	13	1
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	1	-	-	-	-	-	-	-	-	-	1	20			1

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	00%	00%	
'90	00%	00%	00%	
'96	50%	50%	50%	

Total Plants/Acre (excluding Dead & Seedlings)				
'84	66	Dec:		0%
'90	0			0%
'96	40			50%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Chrysothamnus viscidiflorus viscidiflorus																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	3	-	-	-	-	-	-	-	-	3	-	-	-	60	23	31	3

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	00%	00%	
'90	00%	00%	00%	
'96	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
'84	0	Dec:		-
'90	0			-
'96	60			-

Eriogonum heracleoides																		
S	84	2	-	-	-	-	-	-	-	-	2	-	-	-	133			2
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	84	34	-	-	-	-	-	-	-	-	34	-	-	-	2266			34
	90	2	-	-	1	-	-	-	-	-	2	1	-	-	200			3
	96	3	-	-	-	-	-	-	-	-	3	-	-	-	60			3
M	84	13	-	-	-	-	-	-	-	-	13	-	-	-	866	28	17	13
	90	29	-	-	7	-	-	1	-	-	35	-	2	-	2466	7	12	37
	96	20	-	-	-	-	-	-	-	-	20	-	-	-	400	6	12	20
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	2	-	-	-	-	-	-	-	-	1	-	-	1	40			2
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	80			4

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	00%	00%	-15%
'90	00%	00%	05%	-81%
'96	00%	00%	04%	

Total Plants/Acre (excluding Dead & Seedlings)			
'84	3132	Dec:	0%
'90	2666		0%
'96	500		8%

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Mahonia repens																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	2	-	-	5	-	-	-	-	-	7	-	-	-	140	6	5	7

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor
'84	00%	00%	00%
'90	00%	00%	00%
'96	00%	00%	00%

%Change

Total Plants/Acre (excluding Dead & Seedlings)				
	'84	0	Dec:	-
	'90	0		-
	'96	140		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Prunus virginiana																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	3	-	-	-	-	-	-	-	3	-	-	-	60			3
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	1	1	-	-	-	-	-	-	-	2	-	-	-	40	45	49	2

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor
'84	00%	00%	00%
'90	00%	00%	00%
'96	80%	00%	00%

%Change

Total Plants/Acre (excluding Dead & Seedlings)				
	'84	0	Dec:	-
	'90	0		-
	'96	100		-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Purshia tridentata																		
S	84	1	-	-	-	-	-	-	-	-	1	-	-	-	66			1
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
Y	84	1	2	-	-	-	-	-	-	-	3	-	-	-	200			3
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	2	-	-	-	-	-	-	-	-	1	1	-	-	40			2
M	84	1	1	11	-	-	-	-	-	-	13	-	-	-	866	23	19	13
	90	7	4	-	4	2	-	-	-	-	17	-	-	-	1133	25	36	17
	96	2	25	36	1	4	-	-	-	-	67	1	-	-	1360	22	35	68
D	84	-	1	7	-	-	-	-	-	-	8	-	-	-	533			8
	90	-	-	-	-	1	-	-	-	-	1	-	-	-	66			1
	96	-	3	5	-	-	-	-	-	-	7	-	-	1	160			8
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	100			5

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	17%	75%	00%	-25%
'90	39%	00%	00%	+23%
'96	41%	53%	01%	

Total Plants/Acre (excluding Dead & Seedlings)				
'84	1599	Dec:		33%
'90	1199			6%
'96	1560			10%

Rosa woodsii																		
Y	84	2	-	-	-	-	-	-	-	-	2	-	-	-	133			2
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	1	-	-	-	-	-	-	-	-	1	-	-	-	66	15	10	1
	96	2	-	-	6	-	-	-	-	-	8	-	-	-	160	15	8	8

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	00%	00%	00%	-50%
'90	00%	00%	00%	+59%
'96	00%	00%	00%	

Total Plants/Acre (excluding Dead & Seedlings)				
'84	133	Dec:		-
'90	66			-
'96	160			-

AGE	YR	Form Class (No. of Plants) 1	2	3	4	5	6	7	8	9	Vigor Class 1	2	3	4	Plants Per Acre	Average (inches) Ht.	Cr.	Total
Symphoricarpos oreophilus																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	5	-	-	-	-	-	-	-	-	5	-	-	-	100			5
Y	84	18	-	1	-	-	-	-	-	-	19	-	-	-	1266			19
	90	3	2	3	-	-	-	-	-	-	8	-	-	-	533			8
	96	7	-	-	1	-	-	-	-	-	6	-	2	-	160			8
M	84	6	1	1	-	-	-	-	-	-	8	-	-	-	533	32	25	8
	90	1	4	-	4	2	-	3	-	-	14	-	-	-	933	28	40	14
	96	52	11	2	32	-	-	-	-	-	83	-	14	-	1940	31	44	97
D	84	1	-	-	-	-	-	-	-	-	1	-	-	-	66			1
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	1	1	-	-	-	-	-	-	-	-	1	1	40			2
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	20			1

% Plants Showing	Moderate Use	Heavy Use	Poor Vigor	%Change
'84	04%	07%	00%	-21%
'90	36%	14%	00%	+31%
'96	11%	03%	17%	

Total Plants/Acre (excluding Dead & Seedlings)				
'84	1865	Dec:		4%
'90	1466			0%
'96	2140			2%